



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,946	01/31/2006	Janet Preston	07810.0120-00	8965
22852	7590	10/30/2008		
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			EXAMINER AHMED, SHEEBA	
			ART UNIT	PAPER NUMBER
			1794	
			MAIL DATE	DELIVERY MODE
			10/30/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/531,946

Applicant(s)

PRESTON ET AL.

Examiner

SHEEBA AHMED

Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-74 is/are pending in the application.
- 4a) Of the above claim(s) 16-56 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 57-74 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Amendments to claim 57 have been entered in the above-identified application. Claim 70 is canceled. Claims 1-74 are pending of which claims 16-56 are withdrawn from consideration.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 57-74 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 57 has been amended to recite that the "pigment composition has a solids concentration ranging from 40% to 65% solids". However, it is unclear from the Specification and the claims whether the % solid refers to a weight percentage or a volume percentage. Appropriate correction or clarification is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-15 and 57-74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown (US 5,653,795 A).

Brown et al. disclose a method for forming fillers for cellulosic products, and products made using the fillers. The method for producing fillers comprises first providing an ionically dispersed aqueous slurry comprising from about 1 percent to about 30 percent solid mineral particles by weight. The mineral particles are selected from the group consisting of calcium carbonate, calcium hydroxide, magnesium carbonate, magnesium hydroxide, aluminum hydroxide, calcium sulfate and mixtures thereof. Best results are achieved when using mineral suspensions comprising ground natural calcium carbonate or synthetically precipitated calcium carbonate or mixtures thereof. Ground natural calcium carbonate and synthetically precipitated calcium carbonate are typically derived from chalk, limestone or marble. The mineral particles typically are prismatic, rhombohedral, clustered prismatic or scalenohedral particles, but may be of a variety of morphological forms. Typically the mineral particles are in a mixture that includes "coarse particles" (particles having an equivalent spherical diameter of at least about 0.5 microns) and "fine particles" (particles having an equivalent spherical diameter of less than about 0.5 microns). Of the fine particles in such mixtures, typically some are "ultra-fine particles" (particles having an equivalent spherical diameter of less than about 0.2 microns). The mixtures are formed to contain particles that are sufficiently small in size to be useful as fillers or pigments for making paper and paper board. Due to the methods by which they are formed, it is typical for such mixtures to contain least 30 percent by weight of mineral particles having an

equivalent spherical diameter of less than about 2 microns, and generally about 60 percent by weight of the mineral particles have an equivalent spherical diameter of less than about 2 microns. If the mineral particles are anionically dispersed, the anionic dispersant generally is selected from homopolymers or copolymers made from the group consisting of carboxylic acid containing vinyl monomers, sulfonic acid containing vinyl monomers, and mixtures thereof. More specifically, the anionic dispersing agent may be selected from the group consisting of polyacrylic acid homopolymers, polyacrylic acid copolymers, methacrylic acid homopolymers and copolymers, and mixtures thereof, with polyacrylic acid being a currently preferred anionic dispersing agent. Cationic polymeric dispersing agents generally are selected from the group consisting of poly-(alkyl diallyl) quaternary ammonium salts; quaternary ammonium cationic polymers obtained by copolymerizing aliphatic secondary amines with epichlorohydrin; poly (quaternary ammonium) polyether salts that contain quaternary nitrogen in a polymeric backbone chain extended by ether groups; polyamines; copolymers of acrylamide with cationic vinyl monomers; dimethyldiallylammonium chloride; low-molecular-weight polyethyleneimine polyelectrolytes; and mixtures thereof. A currently preferred cationic dispersing agent is dimethylamine epichlorohydrin copolymer. The low-molecular-weight selective aggregating agent can be selected from the group consisting of poly-(alkyl diallyl) quaternary ammonium salts; quaternary ammonium cationic polymers obtained by copolymerizing aliphatic secondary amines with epichlorohydrin; poly (quaternary ammonium) polyether salts that contain quaternary nitrogen in a polymeric backbone

chain extended by ether groups; polyamines; copolymers of acrylamide with cationic vinyl monomers; dimethylamine epichlorohydrin copolymers; dimethyldiallylammonium chloride homopolymer; dimethyldiallylammonium chloride copolymer; divalent metal ion salts; trivalent metal ion salts; polyethyleneimine polyelectrolytes; polyacrylic acid homopolymer; polyacrylic acid water-soluble salts; carboxyl containing polymers derived from methacrylic acid, itaconic acid and crotonic acid; and mixtures thereof. Currently preferred low-molecular-weight selective aggregating agents include dimethyldiallylammonium chloride homopolymer as a cationic aggregating agent and polyacrylic acid homopolymer as an anionic aggregating agent. The amount of the selective aggregating agent added to the ionically dispersed suspension may vary, and is best determined by considering the characteristics desired in the suspension and the cost of the aggregating agent. However, by way of example, the selective aggregating agent may be added to the slurry of ionically dispersed mineral particles in an amount of from about 5 lbs to about 50 lbs per ton of mineral particles, preferably from about 5 lbs to about 25 lbs per ton. A working embodiment of the method for producing fillers comprises first providing an ionically dispersed aqueous slurry comprising from about 1 weight percent to about 15 weight percent ground natural calcium carbonate or synthetically precipitated calcium carbonate. The slurry can be purchased as a dispersed slurry, or the method may include the step of adding a dispersing agent to the mineral suspension to provide a slurry. Best results are achieved when the aqueous slurry is anionically dispersed and comprises from about 1 percent to about 10 percent ground natural calcium carbonate or synthetically precipitated calcium

carbonate (See entire document; specifically col.1, lines 5-7, col. 2, lines 53-67, col. 3, lines 1-20, col. 3, lines 30-52, col. 4, lines 12-31, col. 4, lines 46-54, and col. 4, lines 61-67).

Brown et al. do not state that the "anionic dispersant present in an amount sufficient to overdisperse the at least one calcium carbonate" as in claim 1 or that the "pigment composition has a solids concentration ranging from 40% to 65% solids" as in claim 57.

However, it would have been obvious to one having ordinary skill in the art to optimize the concentration of the calcium carbonate in the pigment composition given that the rheology of the pigment concentration can be controlled by varying the amount of the dispersants and the ease of coating the pigment composition is dependent on the rheology of the composition.

Response to Arguments

4. Applicant's arguments with respect to claims 1-15 and 57-74 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to SHEEBA AHMED whose telephone number is (571)272-1504. The examiner can normally be reached on Monday-Friday from 8am to 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571)272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sheeba Ahmed/
Primary Examiner, Art Unit 1794